

layer comprising a material selected from the group consisting of refractory metal, refractory metal alloy, refractory metal compound, and refractory metal alloy compound on at least a portion of said electroplated layer, wherein said refractory metal compound is selected from the group consisting of nitrides, carbides, carbonitrides, oxides and reaction products of said refractory metal, oxygen and nitrogen, and wherein said refractory metal alloy compound is selected from the group consisting of nitrides, carbides, carbonitrides, oxides and reaction products of said refractory metal alloy, oxygen and nitrogen.

REMARKS

Claims 55-63 have been canceled.

Claim 1 has been amended and is presented for reconsideration. Reconsideration of the rejection of claims 2, 4, 5, 7-24 and 26-36 is respectfully solicited.

Claims 1, 2, 3, 4, 5, 7-9, 21-24, 26-28 and 55-63 stand rejected under 35 USC 103(a) as being unpatentable over U.S. patent No. 5,413,874 (Moysan '874) in view of European patent Application No. 0 486 711 A1 (EP '711).

This rejection is respectfully traversed as to claims 1, 2, 4, 5, 7-9, 21-24 and 26-28. This rejection is moot as to canceled claims 55-63.

The present invention is directed to providing a dry, spot free and clean electroplated surface on which can be applied one or more vapor deposited layers. Providing a thoroughly clean and dry surface before vapor depositing a coating thereon is critical. This is because any surface defects such as spots or stains show through and indeed are accentuated by the thin vapor deposited coating. The presence of spots and stains is especially a problem on an electroplated surface.

The instant invention, as recited in the claims, solves the problem of providing a spot and stain free electroplated layer on which is applied a vapor deposited layer(s). European patent (EP '711) fails to disclose or even suggest a physical vapor deposited layer(s) on the article.

It is respectfully submitted that in order to obtain a composite reference which renders the instant claims obvious, it is necessary to modify the primary Moysan reference and to pick and choose from the secondary European patent application reference only that (drying by blowing pulses of air) which would support a holding of obviousness while ignoring all the other teachings of this secondary reference. It is necessary to carry out these modifications and selective abstractions in the total lack of directions or suggestions in the prior art of the desirability of such modifications and abstractions. As held by the Court of Appeals for the Federal Circuit in In re Laskowski, 10 USPQ 2d 1397, 1399 "the mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification". It is respectfully suggested that there is no suggestion in either Moysan or the European patent application to use the air drying of the European patent application to dry Moysan's electroplated layers.

Claims 29-32 stand rejected under 35 USC 103(a) as being unpatentable over Moysan '874 in view of EP '711 and further in view of U.S. patent No. 5,626,972 (Moysan '972) and U.S. patent No. 4,029,556 (Monaco).

This rejection is respectfully traversed.

Claims 29-32 all ultimately depend from amended claim 1. Thus, claims 29-32 claim subjecting an article having an electroplated chromium layer over an electroplated nickel layer to pulses of air to dry and clean the surface of said chromium

layer of any spots, and thereafter applying physical vapor deposited layers over the clean and dry chromium layer. The cited Moysan ('874), Moysan ('972) and Monaco references all are entirely lacking in a teaching, or even a suggestion, of subjecting the surface of the top electroplated layer to pulses of air to dry and clean said surface. The EP '711 reference is deficient, as discussed supra, in teaching a physical vapor deposited layer applied over the dried and cleaned top electroplated layer. The only way that this claim can be rendered obvious by the cited prior art is by picking and choosing from this art only those selected portions thereof that will support a holding of obviousness. As stated by the Court of Customs and Patent Appeals in In re Wesslau, 147 USPQ 391, it is not within the framework of 35 USC 103 to pick and choose from the relevant prior art only as much as will support a holding of obviousness, to the exclusion of other parts necessary to the full appreciation of what the prior art suggests to one skilled in the art.

Claims 10-13, 18 and 20 stand rejected under 35 USC 103(a) as being unpatentable over Moysan '874 in view of EP '711 in view of Moysan '972 and U.S. patent No. 5,558,759 (Pudem) and U.S. patent No. 4,273,837 (Coll-Palagos).

This rejection is respectfully traversed.

In arriving at this rejection the Patent Office has selected and chosen only certain isolated teachings from five references and rearranged and recombined them to arrive at a composite reference which renders the instant claims obvious. In other words, in arriving at this rejection the Patent Office has used a distillation and rearrangement process which only renders applicants' invention obvious by the use of hindsight. As stated in Northern Engineering and Plastics Corp. v. Eddie et al, 210 USPQ 784, 787 (3rd Cir. 1981):

We must also guard against the hindsight which renders every pure concept natural, intuitive, and "obvious" just because it is fundamentally simple.

With hindsight applicants' invention may appear simple. The mere fact that applicants' invention appears simple with the benefit of hindsight does not make it obvious at the time of the invention. Hindsight is insidious in that it uses applicants' own teaching against him. We must always be aware of this type of rejection. See W.L. Gore & Associates v. Garlock Inc., 220 USPQ 303 (CAFC 1983).

Claims 14-17, 19 and 33-36 stand rejected under 35 USC 103(a) as being unpatentable over Moysan '874 in view of Moysan '972, Monaco and further in view of U.S. patent No. 5,922,478 (Welty).

This rejection is respectfully traversed.

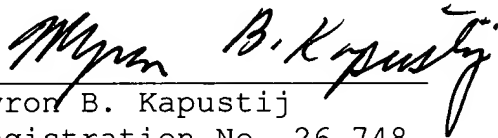
None of these four references discloses pulsing air onto an electroplated article to dry the surface thereof. Since the instant claims all ultimately depend from claim 1 they all recite pulsing air onto an electroplated article to dry and clean said article.

In applying this rejection the Examiner is taking the Moysan '874 reference and by hindsight is combining it with the secondary references using applicants' invention as a road map to find the desired traits in different references and combining them in a way that meet the limitations of the claim. However, apart from applicants' own disclosure, there is no apparent reason or desirability at the time the invention was made for a person of ordinary skill in the art to combine these four references together. There is no apparent reason, desirability or motivation to combine these four references absent applicants' disclosure and therefore the combination is improper.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment.

In view of the foregoing this application, containing claims 1, 2, 4, 5, 7-24 and 26-36, is now believed to be in condition for allowance and action to such effect is respectfully solicited.

Respectfully submitted,


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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1.[amended four times] A process of depositing a multi layer coating on at least a portion of an article surface comprising:

depositing by electroplating at least one metal or metal alloy containing layer on at least a portion of said surface;

subjecting said article surface having said at least one electroplated layer thereon to pulses of air to dry and clean said electroplated article surface; and

depositing by physical vapor deposition on at least a portion of said dry and clean electroplated layer at least one layer comprising a material selected from the group consisting of refractory metal, refractory metal alloy, refractory metal compound, and refractory metal alloy compound on at least a portion of said electroplated layer, wherein said refractory metal compound is selected from the group consisting of nitrides, carbides, carbonitrides, oxides and reaction products of said refractory metal, oxygen and nitrogen, and wherein said refractory metal alloy compound is selected from the group consisting of nitrides, carbides, carbonitrides, oxides and reaction products of said refractory metal alloy, oxygen and nitrogen.